

A DESCRIPTION AND FIGURES OF THREE SPECIMENS OF *MOLACANTHUS* FROM THE CENTRAL PACIFIC OCEAN.

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(Plates lviii.-lix.).

*MOLA* (*MOLACANTHUS*) sp.

The Trustees have received three young sunfish in good condition from Dr. Thomas D. Liddle, R.N. They are only 9.5-13 mm. long, and were taken from the stomach of a kingfish caught swimming near the surface, during the passage of H.M.S. "Torch," between the Ellice and Union Islands, Central Pacific, in 1911. I am unable, owing to the want of literature, to compare them fully with the various young forms that have already been described, but as they differ so greatly from any figures available to me, I have described and figured them here, leaving it to others more fortunately situated to determine their relationship to one or another of the adult species.

Body upright-oval, the depth  $1\frac{1}{4}$  the length in a specimen 13 mm. long; breadth equal to about half the length. Viewed from the front, the body is broad above and narrow below; posteriorly it is much compressed, almost keeled. Eye rather large, less than one-third the distance between the snout and the gill-opening, placed in a broad shallow depression on the side of the head. Mouth small, its width equal to that of the eye, upper jaw forming a pointed beak; its position is below the level of the pectoral and anal fins. Gill-opening oblique, curved, equal to two-thirds the width of the eye; it

is placed behind the middle of the length and above that of the depth. Nostril a small, simple opening in front of the lower part of the eye. Vent very small, placed just below the base of the anal fin.

Skin closely studded with microscopic scutes, each of which is provided with a more or less distinct central tubercle and radiating striæ; they are somewhat rougher on the ventral surface than on the back, and smoother on the sides. There are twenty-one enlarged spiniform dermal tubercles, distributed as follows:—three on the dorsal profile, of which the median is much the largest,  $1\frac{2}{3}$  as long as the eye, and placed in the middle of the back; another large one on the forehead between the eyes; three on the ventral profile, the anterior the largest; all the others are paired, and include a very large one below the base of each pectoral, directed outwards and backwards, and another above the postero-superior angle of each eye. Besides these enlarged tubercles, there are other much smaller ones which do not carry spines, and are intermediate between the larger ones and the minute scutes; they are developed evenly on both sides.

Pectoral with ten rays, the upper the longest, and about  $1\frac{2}{3}$  the length of the eye. Normally, the rays are simple and united by membrane, but, when damaged, they split up the middle, so that, without the membrane, they appear to be free, paired filaments. Dorsal and anal fins each with a fleshy base through which the supports for the rays may be seen when examined against the light. The rays are similar to, and about the same length as those of the pectoral, about fourteen in each fin, the outer ones the longest, the others decreasing in length regularly. Caudal with a small triangular fleshy base covering the supports for the rays, as in the dorsal and anal; there are several, apparently free rays projecting from it, while other shorter ones are present on the interspaces between the dorsal and caudal and anal.

Colour:—greyish above, changing to whitish below. Probably silvery in life.

A second specimen, almost 10 mm. long, differs in being deeper, the length being five-sevenths of the depth; the eye is rather larger, and the spines on the dermal tubercles are much longer. The lower half of the body has been covered with a silvery epidermis, and the fin-formula, which is more easily counted than in the larger specimen, is D.17, A.14 + ?, P.11.

The third specimen is a trifle smaller, but otherwise similar to the second. It is considerably damaged, and some of the larger tubercles are broken off.

One of the most striking differences between these specimens and those figured by Richardson\*, Günther†, and Ryder‡, is in the position of the mouth: in my specimens, it is below the level of the anal fin, whereas, in the others, it is considerably above it. The number and distribution of the spines agrees exactly with those shown in Günther's figures, and, generally speaking, with those of Richardson and Ryder also, but they are much larger. My specimens have a very slight resemblance to *Ostracion boops*, Richardson§, but the figures of that species show no spines on the ventral profile; it must be noted, however, that Hooker's drawings are inaccurate in several important details, as may be seen by comparing one with another.

#### EXPLANATION OF PLATES LVIII.-LIX.

##### Plate lviii.

*Molacanthus* sp. Specimen 13 mm. long. Front and side-views.

##### Plate lix.

*Molacanthus* sp. Specimen almost 10 mm. long. Side-view.

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\* RICHARDSON, Zool. "Sulphur," i., 1844, p.125, pl.xlii., figs.10-12.

† GUENTHER, Study of Fishes, 1880, p.175, fig.94.

‡ RYDER, Rept. U.S. Comm. Fish., 1884 (1886), p.1027, pl.viii.

§ RICHARDSON, Zool. "Erebus and Terror," Fishes, 1844-1848, p.52, pl.xxx., figs.18-21.